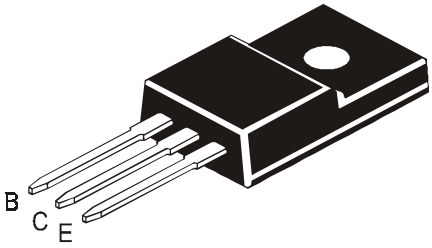
SILICON PLANAR POWER TRANSISTORS

CJF15030 NPN
CJF15031 PNP



TO-220FP Fully Isolated Plastic Package

Designed for General Purpose Amplifier and Switching Applications.

ABSOLUTE MAXIMUM RATINGS.

DESCRIPTION	SYMBOL	VALUE	UNIT
Collector Base Voltage	V_{CBO}	150	V
Collector Emitter Voltage	V_{CEO}	150	V
Emitter Base Voltage	V_{EBO}	5	V
RMS Isolation Voltage (for 1sec,R.H.	(1) V_{ISOL} (a)	3500	V_{RMS}
<30%, T_A=25ºC)	(b)	1500	V_{RMS}
Collector Current - Continuous	I_C	8	A
Collector Current - Peak	I_C	16	A
Base Current	I_B	2	A
Total Power Dissipation @ Tc=25ºC	P_{D**}	36	W
Derate Above 25ºC		0.29	W/ºC
Total Power Dissipation @ Ta=25ºC	P_D	2	W
Derate Above 25ºC		0.016	W/ºC
Operating and Storage Junction Temperature Range	T_j, T_{stg}	- 65 to +150	ºC
THERMAL RESISTANCE			
From Junction to Ambient	$R_{th\ (j-a)}$	62.5	ºC/W
From Junction to Case	$R_{th\ (j-c)**}$	3.5	ºC/W
Lead Temperature for Soldering Purpose	T_L	260	ºC

****Measurement made with thermocouple contacting the bottom insulated mounting surface (in a location beneath the die), the device mounted on a heatsink with thermal grease and a mounting torque of ≥6 in.lbs.**

(1) RMS Isolation Voltage : (a) 3500 V_{RMS} with Package in Clip Mounting Position (b) 1500 V_{RMS} with Package in Screw Mounting Position (for 1sec, R.H.<30% ,Ta=25ºC; Pulse Test: Pulse Width ≤300µs, Duty Cycle≤2%)

ELECTRICAL CHARACTERISTICS (Tc=25ºC unless specified otherwise)

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	MAX	UNIT
Collector Emitter sustaining Voltage	$V_{CEO\ (sus)}$ *	I_C=10mA, I_B=0	150		V
Collector Cut off Current	I_{CBO}	V_{CB}=150V, I_E=0		10	µA
	I_{CEO}	V_{CE}=150V, I_B=0		10	µA
Emitter Cut off Current	I_{EBO}	V_{EB}=5V,I_C=0		10	µA

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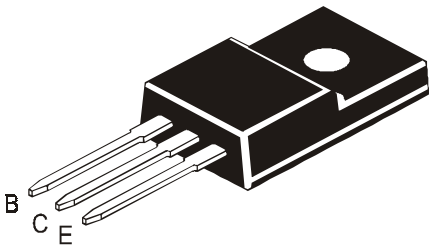

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ELECTRICAL CHARACTERISTICS (Tc=25ºC unless specified otherwise)

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	MAX	UNIT
DC Current Gain	h_{FE} *	I_C=0.1A, V_{CE}=2V	40		
		I_C=2.0A, V_{CE}=2V	40		
		I_C=3.0A, V_{CE}=2V	40		
		I_C=4.0A, V_{CE}=2V	20		
Collector Emitter Saturation Voltage	$V_{CE(Sat)}$ *	I_C=1A, I_B=0.1A		0.5	V
Base Emitter on Voltage	$V_{BE(on)}$ *	I_C=1.0A, V_{CE}=2V		1.0	V
DYNAMIC CHARACTERISTICS					
Current Gain - Bandwidth Product **	f_T	I_C=500mA, V_{CE}=10V f_{test}=10MHz	30		MHz

*** Pulse Test: Pulse Width ≤ 300μs, Duty Cycle ≤2 %**

**** f_T= $|h_{fe}|$ f_{test}.**

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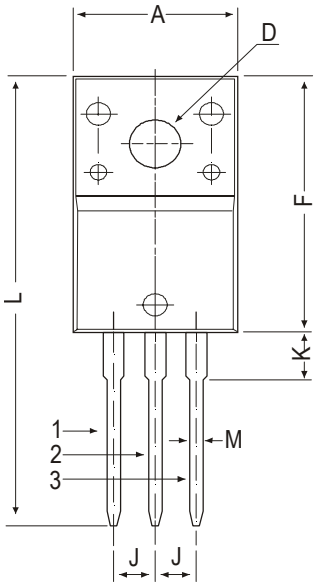
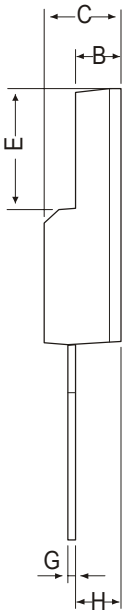
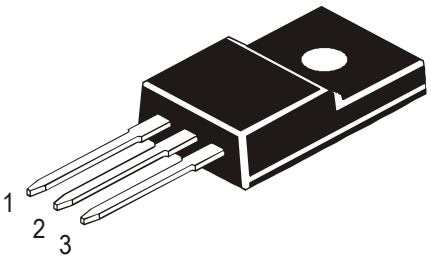




DIM	MIN	MAX
A	9.96	10.36
B	2.60	3.00
C	4.50	4.90
D	3.10	3.30
E	7.90	8.20
F	16.87	17.27
G	0.45	0.50
H	2.56	2.96
J	2.34	2.74
K	—	3.08
L	—	30.05
M	—	0.80

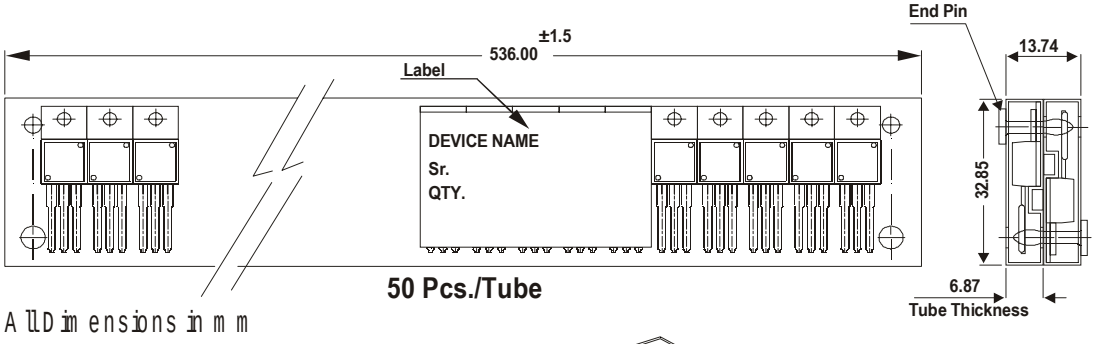
All diminsions in mm.



Pin Configuration

1. Base
2. Collector
3. Emitter

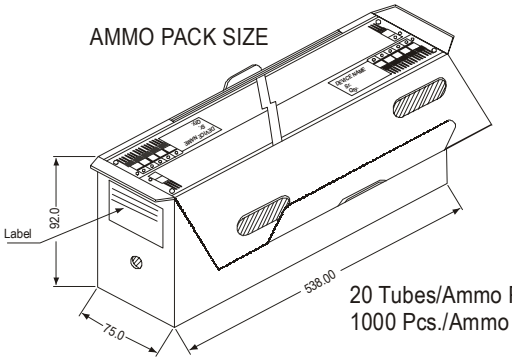
TO-220 FP Tube Packing



50 Pcs./Tube

All Dimensions in mm

AMMO PACK SIZE



20 Tubes/Ammo Pack
1000 Pcs./Ammo Pack

Packing Detail

PACKAGE	STANDARD PACK		INNER CARTON BOX		OUTER CARTON BOX		
	Details	Net Weight/Qty	Size	Qty	Size	Qty	Gr Wt
TO-220FP	200 pcs/polybag	396 gm/200 pcs	3" x 7.5" x 7.5"	1K	17" x 15" x 13.5"	16K	36 kgs
	50 pcs/tube	135 gm/50 pcs	3.5" x 3.7" x 21.5"	1K	19" x 19" x 19"	10K	28 kgs

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